Chapter 8

Conclusions

In this research I have attempted to understand how the Internet Generation learns about the past using the Web. In tackling this rather broad topic which involves other areas in addition to education, I first provided literature reviews about the themes in which I was interested (Part One) and then a field-research-based study of those subjects in relation to two real-life history classes (Part Two). The central themes were [1] history education, with a focus on the lower cycle of secondary education; [2] new media technologies, particularly the Web, which have been presented as one of the most decisive factors determining ways in which the Internet Generation interacts with [historical] information; and [3] the digitisation of cultural heritage. In this chapter I would like to provide some final observations that not only offer a broad picture of the major points I discussed, but also highlight the new insights this research has brought to one’s understanding of the uses of digital media in history-learning, and the role they seem to play in achieving the official key targets of history education. In what follows, I shall first sketch some of the ways the Internet Generation appears to learn history using the Web, and then make some observations about the extent to which heritage institutions’ digitisation strategies and expectations fit in with those Web-driven learning styles. Lastly, I shall consider those learning styles in the light of the key targets of history education in the lower cycle. Concluding each of these points I shall provide a set of recommendations and perspectives for further research.

8.1 What Digital Learners Do with the Web

This research strove to shed light on some of the ways in which the Digital Generation, especially those aged 13–14 years, learn history using the Web. The exploration of three assumptions in two case studies has revealed the emergence of new Web-driven ways of becoming acquainted with the past. It seems that the combination of the availability on the Web of a multitude of historical sources [some conventional, others unconventional] with the psycho-cognitive developmental stage of early adolescents and their corresponding thinking patterns, has given rise to a number of changes in the ways in which history is learnt. In this section, I propose to make
some concluding observations about these changes, starting with the ways in which young history learners approach the multitude and variety of sources accessible via the Web. I shall then deal with the ways in which their approaches have resulted in the convergence of sources and given rise to practices such as multiple-source quote-compilation and summarising. Finally, I shall make a number of observations about ways in which the Web appears to be turning young pupils into multitasking-minded learners, while at the same time fostering peer interaction on the subject matter.

One major change the Web has brought about relates to the knowledge and information landscape itself, where, in contrast with the pre-Web era, all kinds of information, official and non-official, conventional and unconventional, authoritative and non-authoritative, etc., appear side by side. The result of this in the history class, as this research has shown, is that digital learners have embraced this multitude of sources including ones that were previously regarded as unusual for class assignments. The sources used by the pupils in the two case studies included the websites of individual people [or blogs], families, newspapers, TV stations, churches, municipalities and other official bodies, academic and research institutions, canons, user-generated-content sites like Wikipedia, travel agencies, heritage institutions, educational projects and many others. In one case study (Chapter 5), although the pupils were given instructions to use specific sources, the end result showed that none of them had used all the mandatory sources, most of which were conventional sources, while most of them made use of non-recommended sources, including many unconventional ones. In the second case study (Chapter 6), the instructions given for a WebQuest assignment were not about the sources to be used, but rather about the procedures to be followed. In terms of source categories used, the results were almost identical for both case studies. This finding might lead one to conclude that, when it comes to using the Web as a source of historical information, pupils tend to take advantage of their sense of freedom to decide for themselves which sources they will use.

On the premise that early adolescents are cognitively speaking less skilful than experts (Chapter 7), and that search engines have introduced new relevance and reliability criteria based on popularity rather than on conventionality (Chapters 3 and 7), this freedom has shed light on several aspects. First, with respect to frequency, as demonstrated in Chapters 5 and 6, unconventional sites – including Wikipedia and personal sites – were used more often than conventional ones. Also noted was the fact that the websites of some institutions, though considered prime references for the topics to be discussed in the assignments, were totally absent. Some scholars have
equated unconventional sites with 'bad' or 'less good' information and conventional ones with 'good' information, especially for early adolescents, who find it difficult to check authorship or practice the corroboration heuristics. From the two case studies, however, there is no evidence suggesting that blogs or personal sites contained 'bad' information or that official or heritage institutions' sites contained 'better' information.

What did appear is a mixture of, and a convergence between, the two categories of sources (Chapter 7). One might therefore conclude that the young digital learners' search for historical information on the Web leads to convergence, which takes one back to the debate on approaches to history teaching that was discussed in Chapter 1. One of the main points discussed there was whether pupils should be expected to acquire a certain body of knowledge that fosters identity and citizenship education, or alternatively, acquire some historical awareness, including learning how to negotiate between competing sources. An analysis of Web-driven instruction alongside an analysis of the pupils' assignments reveals that the Web is exceptionally favourable towards the development of historical awareness together with corresponding reasoning and thinking skills. In the case study in which Web-based videos were frequently used (Chapter 5), forms of associative and deductive reasoning [among others] were observed as being connected with some intrinsic features of the Web. In the second case study, in which pupils had more freedom to use digital media (Chapter 6), there was clear evidence that source-evaluation and other skills were being fostered.

This research has also shed some light on two ways in which digital learners deal with the historical information they find on the Web: quotations and summaries. The findings in one case study (Chapter 5) suggest that caution is called for with respect to the widespread belief that lengthy, uninterrupted, non-interpreted quotations are a sign of intellectual weakness that is exacerbated and encouraged by the Web, where the [supposed] right quote can be found after only a few clicks. This research has shown on the one hand that quote-compilation is not as effortless as it has often been presented, and on the other hand that it is in keeping with the thinking patterns of early adolescence. Despite the lack of verbal, written connections – causal, consequential or otherwise – between quotations, it was clear that locating the sources and the relevant fragments, and then ordering them in a certain way that results in a new coherent narrative is a reflection of the pupils' multiple-source-based historical understanding of subject matter. Viewed from the point of view of the contemporary digital culture, quote-compilation has been equated with new forms of artistic creativity based on
sampling, remixing, mashing up, and similar practices that are in vogue among the Digital Generation.

Also noted was the fact that quote-compilation was not only the result of the open way in which the assignment and the tasks were designed and described [Write an article about …], as it was also influenced by the limited time and access to the Web. In the case study in which the assignment and the tasks were designed and described in a more restrictive way [Use Web sources and make a short poster …], and where access to the Web was not an issue (Chapter 6), summaries emerged as the sole, dominant method of processing and converting multiple-source-based materials into short accounts. An analysis of the summaries revealed that the pupils spent more time and energy weighing sources up against one another and in trying to detect corroborative details. In some cases sources even contained false information [a misspelling for instance], but the pupils still managed to detect the right information.

This research also made it apparent that Wikipedia plays a particularly significant role among digital learners. In the two case studies, Wikipedia emerged as easily the most frequently cited source, meaning that it was dominant as a source not only of quotations, but also of corroborative details for all summaries. In some cases, both the Dutch and the English pages of Wikipedia on the same topic [e.g.: Rembrandt] were cited in a single assignment. Pupils’ comments and ratings of sources in one case study (Chapter 6) show that Wikipedia has become incomparable and a reference against which other sources, including official ones, are measured. However, as the comments show, Wikipedia is mostly praised for its huge quantity of information and the widespread coverage it offers.

In addition, the Web appears to be the focal point of a learning style that involves some forms of multitasking-driven thinking, consisting of conducting more than one task in a coordinated manner. Contrary to the widespread belief that web- or digital-media-centred multitasking and the thinking process underlying it are distractive, this research showed that the circumstances under which digital media are used determine whether their use is distractive or not. In one of the case studies, where the pupils enjoyed almost unlimited freedom to use digital media wherever and however they pleased for Web-surfing, listening to music and even for gaming (Chapter 6), these same pupils appeared to be more concentrated and, as indicated by some of the signs observed, were engaged mostly in tasks related to the subject they were supposed to be studying. The triangular learning process, which was explained in Chapter 7, is one instance of how the Web has rendered the history class not only attractive but also efficient through what I termed disabstrac-
tion, or rendering an abstract object or concept concrete through a visual representation. In the other case study, where the use of the Web was teacher-centred and inaccessible to the pupils, digital media did appear to constitute a distraction (Chapter 5). This distraction does not necessarily mean that the pupils engaged in tasks that were unrelated to the subject they were studying, as observation has demonstrated that some were actually relevant to the topics being discussed. The distraction resided more in the clandestine way in which the pupils engaged with digital media rather than in the media themselves or the information they were seeking.

A related phenomenon that could be thought to constitute, or be misinterpreted as Web-generated distraction, is peer interaction. Here also the digital divide observed between the two classes (Chapter 7) was what made productive peer interactivity possible in one case but distractive in another. While in one case study every pupil owned a portable computer with no content-filtering software that was connected to the Web (Chapter 6), in the other, only the teacher was able to connect to the Web. Moreover, the use of digital devices such as mobile phones was not permitted (Chapter 5). The result of this digital divide was that in the former case study, pupils would share information, thereby prompting instant comments from one another about Web-based historical information in a way that appeared not to disturb the rest of the class. In the latter case study, pupils had little time and few opportunities to share Web-based information, as the use of personal devices – the sole means of having Internet connectivity – was prohibited during class time. As shown in Chapter 6, Web-driven interactivity, even during class time, presents a considerable potential in terms of discussing and understanding self-sought historical information.

The observations I made above about some of the ways digital learners used the Web to acquaint themselves with the past lead to suggest the following recommendations: [1] to provide pupils with portable computers or allow them to bring into the classroom their own private devices, including mobile phones; and having done that, then [2] to grant them the necessary freedom to explore whatever sources they think relevant. Computer-ownership is a crucial and motivating factor as it leads to an intimate trust-based relationship between the learners and their computers. As a consequence, they would probably engage much more with online historical information wherever they are [at home or at school]. What also becomes apparent is that adolescent digital learners are keen on learning how to learn while they are learning. In other words, they seemed to be learning to construct their own knowledge [with self-sought, self-interpreted information, etc.] while listening to the teacher and read-
surfing the past. They would gain much from this learning style if they were allowed and encouraged to learn to surf the Web even during class time, because if a detail is not checked, clarified, *i.e.*, disabstracted *here and now*, it will most likely be forgotten or pushed into the background by other details during the lesson or during subsequent lessons that day. In other words, waiting until the evening when they can access the family computer is not the best way to enable pupils to disabstract the many abstract historical concepts, figures, events, places, *etc.*, they come across during their history lessons.

Further research is needed into a number of subjects to which I alluded, for example, the relationship between media freedom [*in all senses*] or lack of it and quote-compilation. The assumption made in this research is that when pupils have less time and restricted access [*due to the computer room almost always being occupied and the use of fire-walled Web-browsers*] to interact with online historical information during formal learning time [*at school*], they tend to put less effort into making their assignments. In other words, having little time to dig deeply into texts, and then into cross-textual thinking, they would simply locate the appropriate texts and paragraphs and copy-paste them into their assignments. A related assumption that needs further investigation is that in the long run a constant *disabstraction* effort during the course of a lesson, would provide pupils with the opportunity to progressively read multiple texts full of relevant details. Further research is also needed to enquire into Web-driven forms of multitasking, especially the one I described as the Triangular Learning Process. Understanding exactly what kind of sources pupils consult and what kind of details trigger most Web-based *disabstraction* efforts would be important for teachers in classrooms where media freedom is already a reality, and inspire those who envisage to embark on similar or related Web-driven innovations.

### 8.2 Digitised Heritage in Digital Learners’ Eyes

In Chapter 3, which was entirely dedicated to the digitisation of cultural heritage, I discussed how history education, especially history education for the Digital Generation, became a prime target for heritage institutions. In practice one saw that the strategies and approaches used to reach that Generation initially raised questions in particular about the findability and the pedagogical enhancement of objects through contextualising hyperlinking. In short, that chapter was a discussion of what heritage institutions and policy-makers thought digitised heritage would mean for history education. In
this section I would like to examine this from the other way round, by drawing some conclusions about the extent to which digitised heritage has managed to actually make it onto the history-learners’ computer screens. By doing so, I shall assess the place of heritage institutions among the other historical sources pupils used, weighing it up against some of the expectations that policy-makers and heritage institutions brought forward to justify the initial investments. In the paragraphs below I shall first sum up the ways in which – and the extent to which – digitised heritage sites were used as sources of historical information, before evaluating whether they have, in one way or another, achieved the educational aims with which they were assigned.

The findings of the two case studies are conclusive about the extent to which the pupils used heritage institutions’ websites for their class assignments. They were underused, especially if one considers that the assignment topics were often historical figures who have institutions dedicated to preserving their heritage but which were not cited. Rembrandt [Rembrandt House Museum] and to some extent Huygens [Museum Boerhaave] are two of the many examples. Furthermore a comparison with personal sites reveals that these were more popular with the pupils than the websites of heritage institutions. In addition to that, it seems that heritage sites were only interesting for their images rather than for their narratives. Many pupils delivered highly illustrated assignments whereby most of the pictures originated from heritage websites. In some cases a single website [e.g., the Memory of the Netherlands] provided dozens of images for one assignment. At the same time, learners’ comments from one case study (Chapter 6) indicated criticism of the poor and insufficient textual contents provided by heritage institutions.

Two conclusions can be drawn from this underuse of heritage websites: firstly, as explained in Chapter 3, the no-hyperlinking policy resulted in those websites being difficult to find, to the extent that better-linked personal sites scored far better with the pupils. Secondly, the sites that pupils did occasionally manage to find offered little more than pictures, as almost all quotations and summaries were referenced as mostly having been obtained from Wikipedia, the Canon of the Netherlands, and a few other sites. The result was that pupils were able to view pictures of historical figures, old ships or painters, but without being informed about what they meant, as this would have resulted in such comments as ‘Everything/much information about …’ those figures, ships or painters.

In a similar vein, this research did not reveal any particular indication that digitised heritage has specifically and explicitly fostered national identity and citizenship. However, there was a number of
indirect ways in which some identity-shaping and citizenship education aspects could be observed, especially in the case study in which Web-use was teacher-centred (Chapter 5). In that case study, the Canon clips on land reclamation in the 17th century and on a citizen-led rebellion in the 18th century, both of which include digitised objects, could be interpreted as indirectly conveying some ideological message. Even in this respect, pupils still made some transnational connections, for example, with the French Revolution. The former clip could be understood from the perspective of ‘our scientific heritage’, while the latter could be viewed as an attempt to get the generally uninterested young generation to participate in civic activities.

Considered from the pupils’ perspective, that is, based on their assignments, it is apparent that the Web made their thinking more global than local. Dutch scientist Huygens, canonised as embodying ‘our scientific heritage’, was presented as inspired by, and having much admiration for, non-Dutch Descartes and Galileo. The drawing of the map of the Dutch East India Company routes was not necessarily created using a Netherlands-based digitised map, but rather, as in the case of one assignment, a map from the National Library of Australia’s website. Even the canonised artists were mostly discussed based on Wikipedia and, to a lesser extent, on personal websites, where people have other motivations and perspectives than those of fostering national identity and citizenship. In none of the assignments were expressions used such as ‘our nation’, ‘our culture’, ‘our values’ or ‘our heritage’.

From these observations, it could be concluded that there is one reason why digitised cultural heritage was not completely successful at achieving its identity-shaping and citizenship-fostering aims. As the sites created by heritage institutions for their digitised collections were not at the top of the results list returned by search engines, nor even on its first page, they were as I have already emphasised, hardly in any position to limit inquisitive digital learners to the sole perspective of politicians, policy-makers, and heritage institutions. Interacting constantly with other multiple-perspective sources, mostly Wikipedia, digital learners seem to include the non-Dutch perspective by making associations and via links – ones that have largely failed to materialise within the websites of heritage institutions – to foreign but relevant sources. Although no generalisation can be made on the basis of two case studies, the Web might be credited as being a global-identity and global-citizenship fostering tool, as it counters politicians’ efforts to focus on the local and protect it from the influence of the global (Chapter 3).
Given that digitised heritage appears to have been underused by the digital learners in the two classes, and that its national identity-shaping and citizenship-fostering functions seem to be indissociably linked with Web-fostered global identity and citizenship, a few recommendations could be made that might render it more profitable for history education. If heritage institutions are to reverse the tendency to underuse them, they must [1] engage in large-scale, intensive cross-linking, both in-house within collections and to other institutions’ collections. Since hyperlinking is the new criterion for visibility, the many valuable sources will never succeed in getting onto digital learners’ screens if they are not placed in a hyperlinked environment. This would involve a number of sacrifices – the most important of which is the renouncement of [part of] the institutions’ identity – and a redefinition of collection management tasks to include content organisation and contextualisation. The Ministry of Education, Culture and Science could help speed up this process by creating a system for rewarding visibility and contextualisation-oriented efforts among cultural heritage institutions.

However, in addition to hyperlinking, institutions must [2] provide sufficient textual information from which links can be made. This would turn them into sources of textual information, which is what digital learners are generally seeking, rather than image databases. The same Ministry could also [3] help heritage institutions out of the impasse vis-à-vis tax-payers’ money, as this does not seem to be a major issue for other State-sponsored media sectors. One solution could be to explore sharing traffic-related revenues with third parties engaged in online, traffic-based commercial activities, which could even generate more income for institutions. Since it is evident that Wikipedia is ahead of heritage websites and the overall list of pupils’ sources shows a clear convergence of conventional and unconventional sources, heritage institutions would be well-advised to [4] join the convergence trend, for example, through Wikipedia.

As the above does not even begin to exhaust all aspects of digitised heritage and its use in history education, further research is needed to investigate some of the issues that have been raised. For instance, the review in Chapter 3 referred to the existence of educational modules by teachers either within closed or open environments or in the form of Wikis, as well as the emergence of do-it-yourself tools. As none of these were used in either of the classes, there was no reason to enquire about them any further. However, further research would help to check, for instance, whether the same remixing and mashing-up skills observed in other aspects of digital culture are also being used here, and whether – and if so in what ways – they are also fostering pupils’ creative thinking based on digi-
tised heritage and their convergence with other sources. This aspect of the use of digitised heritage is still virgin territory in need of explorers. Finally, Chapter 7 also cited a number of heritage institutions that are pioneering with convergence by surrendering [part of] their digitised collections to unconventional, user-generated-content websites. Further investigation is necessary to understand not only the significance of this move for history-learners, but also its implications for digitised collections in terms of online visibility.

8.3 The Web and History Education Targets

As shown at the beginning of Chapter 5, there is a law that defines the goals officially and legally assigned to history education in the lower cycle of secondary education (Donner, 2006). Of the twelve targets of the umbrella discipline known as Mens en Maatschappij [Mankind and Society], of which history is a part, four relate specifically to history education, namely [1] learning how to place events, people, and major developments within the framework of the ten historical eras, in order to establish connections between past events and developments in the twentieth century; [2] learning how to identify the implications of pupils’ image of their locality, the Netherlands, Europe, and the world for their own environment; [3] learning how to use historical sources; and [4] learning how to view current tensions and conflicts against their historical background. In what follows, I would like to identify some of the findings that could provide some indications about ways in which the Web appeared to help achieve the above-mentioned targets.

I would like to begin with a caveat relating to the methodology used for the field research. As I mentioned in Chapter 4, I did not use any experimental method meant to check the kind and level of understanding the pupils had of any particular subject matter. Instead, as a moderate participant observer, I carefully observed the various ways in which the pupils interacted with online contents and I subsequently analysed those interactions as well as the written assignments that resulted from them. This methodological approach was not intended as a detailed evaluation of achieved and non-achieved targets. Moreover, the targets are described as a process [learning being itself a process] to be achieved during the three years of the lower cycle, one that could not be compressed into the six months I spent observing the two classes. Having posited this caveat, I nevertheless feel I am in a position to say that some of the elements observed could provide some indications of how the Web seemed to help the pupils come closer to achieving those targets.
With regard to the first target, which could be interpreted as acquiring the ability to place past events in the right historical era and connect them to relevant 20th-century developments, the Web could clearly be observed making a contribution to its achievement. A Web-based Canon clip on the ‘Patriots’ [1780–1795] triggering a reaction that refers back to the 1789 French Revolution could be interpreted as a sign of the pupil’s ability to locate an event in its historical era, in this case the Era of Wigs and Revolutions [1700–1800]. In relation to the second target, which could also be extended to mean the ability to identify the global implications and connections of a local place, event, or figure and vice-versa, there were a few instances suggesting indications that the Web fosters this ability. For instance, moving from Huygens to Descartes and then to Galileo, thereby presenting their scientific works as being related to one another, is a sign that the pupil was able to understand the local [Dutch] scientist’s work in the light of, and in connection with, those of two other European scientists.

Unlike the two previous goals, the third one about learning how to use historical sources was explored in depth in Chapters 5 and 6, and subsequently analysed in Chapter 7. In short, my observations show that the Web, by presenting a variety of sources online, has created a situation in which pupils have to negotiate their way among those sources in order to find the ones they deem relevant. Two main sorts of uses were identified, namely summaries and quotations, to which a third could be added, namely the use of images. I also discussed how at their psycho-developmental stage, namely early adolescence, and due to the new relevance criteria brought about by search engines, the pupils approached sources in a manner that resulted in the convergence of conventional and unconventional sources. Their convergence-minded approach consisted in using both categories of sources in a complementary way.

Finally, the fourth target, which could be interpreted as acquiring the ability to view current tensions against their historical background, it appears that the Web has a potential to facilitate how pupils express their understanding of current major socio-cultural tensions, and how they perceive them as being rooted in the past. In one case (Chapter 6) an assignment on religions in the Middle Ages resulted in an essay on the Crusades being illustrated with the Wilders-vs-Islam cartoon. A peer discussion revealed that the pupil was viewing a current tension, embodied by far-right political leader Geert Wilders’ anti-Islamic opinions against a historical background that he regarded as relevant and appropriate.
All the above-mentioned targets could be said to contribute to pupils’ understanding of – and their ability to cope with – the present world. As shown in Chapter 1, there are different conceptualisations of this general aim of history education, with on the one hand scholars and history education experts emphasising mostly the acquisition of historical awareness and literacy – that is, understanding how history works as a discipline and how historical narratives come into being – and on the other hand politicians emphasising an understanding revolving around a specific body of core historical knowledge. This research has revealed a number of aspects of the kind of understanding pupils arrive at from their interaction with historical information on the Web.

The most important finding in this respect is that because of the search engines, pupils go first to the most popular sites, the most important of which appeared to be Wikipedia. In the case study in which the pupils were specifically asked to use, among others, the Canon as a mandatory source together with Wikipedia (Chapter 5), the former – a core historical-knowledge site – appeared the same number of times as the latter – an open-source history site. When no mandatory sources were indicated, Wikipedia retained first place, while the Canon was relegated to position eight on a list of ten source categories. The conclusion one might draw from this convergence and the relationships between core historical-knowledge sites and their open-source historical knowledge counterparts is that the Web has rendered any exclusive approach extremely difficult, if not impossible, and this can be regarded as an indication of the enormous import of the Web to history education.

Since three of the four key targets of history education in the lower cycle are about linking – events, people, and developments to historical eras, the local and the national to the international and vice-versa, and the present to the past – and since the Web is mainly about hyperlinking, I would like to recommend [1] the full integration of the Web into history teaching plans and strategies in a way that highlights and encourages those links. One way to do that would be by encouraging pupils to check those links, for example, by clicking on Descartes on the Huygens page on Wikipedia, in order to better understand the connections between the two scientists. In other words, they need to be taught to go beyond merely mentioning such links to finding the evidence that justifies the links. Regarding the use of sources, I also recommend that [2] pupils are given the freedom to explore all sorts of historical sources, provided that they are informed about the various sorts of online source categories and about the differences between them.
The above made references to a number of elements that appeared in this research, indicating the Web's potential to contribute to achieving the key targets of history education in the lower cycle. However, no firm conclusions can be drawn based on the few examples provided above. This means there is a need of further research in order to provide a more detailed and systematic picture of the role the Web plays in achieving those targets. One way would be to follow a particular class from the first to the third year of the lower cycle, evaluating the stages reached at each level using experimental methods such as Think-aloud protocols, among others, and correlating these stages with test scores. At the end of the lower cycle, a comparative study of the progress achieved at each stage would be capable of showing more clearly whether or not, and how, the Web as a source of historical information contributes to the achievement of the key targets. What this research has shown in this respect is that the Web does have that potential.